

**IN THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1(Currently Amended). A method of implementing a parallel  $n$ -th order IIR filter which comprises the steps of:  
providing an IIR filter of order less than  $n$ ; and  
operating said IIR filter of order less than  $n$  on a time-sharing basis a plurality of times such that said plurality of times multiplied by the order of said IIR filter of order less than  $n$  is equal to or greater than  $n$ , wherein a number of clock cycles required for computing an output of the  $n$ -th order IIR filter is independent of a number of filter coefficients of the  $n$ -th order IIR filter.

2(Original). The method of claim 1 wherein said plurality of times multiplied by said order is equal to  $n$ .

3 (Currently Amended). The method of claim 1 further including providing a decoder coupled to an input terminal of the  $n$ -th order IIR filter.

4 (Previously Presented). The method of claim 2 further including a providing decoder coupled to an input terminal of the  $n$ -th order IIR filter.

5 (Currently Amended). An implementation of a parallel  $n$ -th order IIR filter which comprises:  
an IIR filter of order less than  $n$ ; and  
means to operate said IIR filter of order less than  $n$  on a time-sharing basis a plurality of times such that said plurality of times multiplied by the order of said IIR filter of order less than  $n$  is equal to or greater than  $n$ , wherein a number of clock cycles

required for computing an output of the n-th order IIR filter is independent of a number of filter coefficients of the n-th order IIR filter.

6(Original). The implementation of claim 5 wherein said plurality of times multiplied by said order is equal to n.

7(Currently Amended). The implementation of claim 5 further including a decoder coupled to an input terminal of the n-th order IIR filter.

8(Currently Amended). The implementation of claim 6 further including a decoder coupled to an input terminal of the n-th order IIR filter.

9 – 10. Canceled.